

ABSTRACT

A speed reducer and a yaw drive apparatus for a wind power generation apparatus, where the speed reducer has  
5 high efficiency and a short axial length, and suitable for the yaw drive apparatus. The speed reducer has three stages for speed reduction. The total reduction gear ratio of a first stage speed reducing portion 10 and a second speed reducing portion 20 is set to  $1/6$  to  $1/60$ ,  
10 and a third stage speed reducing portion 30 is constructed from an eccentric oscillating-type speed reduction mechanism having an internal gear member 32, external gears 34, crankshafts 35, and a carrier 37. The reduction gear ratio of the eccentric oscillating-type  
15 speed reduction mechanism is set to  $1/50$  to  $1/140$ , and the total reduction gear ratio of the speed reducer is set to  $1/1000$  to  $1/3000$ . A yaw drive method and the yaw drive apparatus can reduce noise, and the yaw drive apparatus is inexpensive and reduced in size.